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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,302	09/10/2004	Takaaki Hashimoto	2004-1399A	4420

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EXAMINER

HRUSKOCI, PETER A

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 09/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/507,302	<b>Applicant(s)</b> HASHIMOTO ET AL.	
	<b>Examiner</b> Peter A. Hruskoci	<b>Art Unit</b> 1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 9/10/04, 3/15, and 4/28/06.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

The disclosure is objected to because of the following informalities: On page 17 line 25 “subsatances” is erroneous, and should be changed to – substances -.

Appropriate correction is required.

Claims 1-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1 “treating” is vague and indefinite because it is unclear how this term further limits the claim. Claims 2-34 depend from claim 1.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 8, 9, 11-16, 21-25, 33, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiota et al. 6,797,184. Shiota et al. disclose (see col. 5 line 44 through col. 8 line 55, and col. 13 line 55 through col. 14 line 66) a method for treating waste water substantially as claimed. The claims differ from Shiota et al. by reciting that the pores of the catalyst have a specific radius. It is submitted that the teachings of Shiota et al. include the recited pore volume, and do not appear to be limited to a specific pore radius, or exclude the recited pore radius. It would have been obvious to one skilled in the art to modify the method of Shiota et al. by utilizing the recited pore radius, to aid in catalytically oxidizing the waste water. The specific pore radius utilized would have been an obvious matter or process optimization to

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one skilled in the art, depending on the specific waste water treated and results desired, absent a sufficient showing of unexpected results.

Claims 7, 17-20, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiota et al. as applied above, and further in view of Harada et al. 4,699,720. The claims differ from Shiota et al. by reciting that catalyst is a crushed shape. Harada et al. disclose (see col. 5 line 15 through col. 6 line 65) that it is known in the art to utilize crushed catalyst fragments in the catalytic oxidation of waste water. It would have been obvious to one skilled in the art to modify the method of Shiota et al. by utilizing the recited crushed shape catalyst in view of the teachings of Harada et al., to aid in catalytically oxidizing the waste water.

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shiota et al. in view of Harada et al. as applied above, and further in view of Loew et al. 5,405,532. The claim differs from the references as applied above by reciting that the waste water is subjected to a membrane or adsorption pretreatment. Loew et al. disclose (see col. 1 line 53 through col. 3 line 41) that it is known in the art to utilize adsorption and membrane pretreatments in combination with catalytic oxidation, to aid in the purification of waste water. It would have been obvious to one skilled in the art to modify the references as applied above, by utilizing the recited pretreatment in view of the teachings of Loew et al., to aid in purifying the waste water.

Claims 10, 27-31, 33, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiota et al. as applied above, and further in view of Loew et al. 5,405,532. The claims differ from Shiota et al. as applied above by reciting that the waste water is subjected to a membrane or adsorption pretreatment. Loew et al. disclose (see col. 1 line 53 through col. 3 line 41) that it is known in the art to utilize adsorption and membrane pretreatments in combination

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with catalytic oxidation, to aid in the purification of waste water. It would have been obvious to one skilled in the art to modify Shiota et al. as applied above, by utilizing the recited pretreatment in view of the teachings of Loew et al., to aid in purifying the waste water.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter A. Hruskoci whose telephone number is (571) 272-1160. The examiner can normally be reached on Monday through Friday from 6:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Peter A. Hruskoci  
Primary Examiner  
Art Unit 1724

8/30/06